COUNTY OF LOS ANGELES
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TO: Each Supervisor

FROM: Jonathan E. Fielding, M.D., M.P.H.
Director of Public Health and Health Officer

SUBJECT: **UPDATE ON COMMUNITY ASSOCIATED MRSA**

This is to provide you with an update regarding methicillin resistant *Staphylococcus aureus* (MRSA) in non-hospital settings and our activities related to its prevention and control. The attached summary provides an overview of MRSA, delineates hospital acquired and community associated MRSA (CAMRSA), and discusses our efforts to prevent and control MRSA in community settings. Overall there has been a substantial increase in these infections throughout the United States, a trend that we have also seen in Los Angeles County.

CAMRSA outbreaks have been reported in athletes, the military, correctional facilities, and schools where conditions for the spread of CAMRSA are enhanced. These conditions include close crowded living conditions, sub-optimal cleanliness, frequent skin to skin contact coupled with compromised skin integrity, contaminated surfaces and shared items.

Public Health receives reports of multiple cases as a part of routine outbreak notifications and follows up on all such reports. Our primary prevention and control efforts focus on educating health care providers and community members regarding CAMRSA and disseminating guidelines on reducing the transmission of MRSA in non-health care settings. In addition to our prevention and control efforts, Public Health continues to work with the Sheriff's Department and the Department of Health Services. Public Health does not conduct active surveillance for single MRSA cases because of the high frequency of cases and the fact that the results of such surveillance would not affect our control strategy.

Public Health staff will continue on-going efforts to educate the public and medical providers about MRSA. If you have any questions regarding our efforts to reduce the transmission of community associated MRSA, please let me know.

JEF:aml

c: Chief Administrative Officer
County Counsel
Executive Officer, Board of Supervisors
Director of Health Services

Community Associated Methicillin Resistant *Staphylococcus aureus* Update
October 24, 2006

Background

Methicillin resistant *Staphylococcus aureus* is an emerging disease in community settings but has been well described in healthcare settings for over 20 years. Healthcare associated MRSA (HAMRSA) primarily causes invasive disease and is seen in patients with significant exposure to healthcare (hospitalization, dialysis, surgery, nursing homes); it is rarely seen in patients that have not had primary exposure to the healthcare system. However, since 2000, there have been increasing reports of patients outside the healthcare system with skin and soft tissue infections (community associated MRSA or CAMRSA). By 2004, almost 60% of skin and soft tissue infections in adults in emergency rooms across the nation are caused by CAMRSA. Children also appear to be at higher risk for CAMRSA.

Scope of the Problem

MRSA is not a nationally reportable disease and few jurisdictions have systematic surveillance for MRSA except as part of special studies. In a recent study based in Atlanta and Baltimore, the annual incidence of CAMRSA was 18-25.7 per 100,000 people; 23% of these cases were hospitalized. This is a higher rate than the other most commonly reportable diseases followed by public health. It appears that what we are seeing in Los Angeles County is consistent with what other jurisdictions are experiencing. Locally, the percent of skin infections due to MRSA at the Olive View emergency room increased from 29% in 2001-2002 to 64% from January 2003-March 2004. Similar results have been found in San Francisco, Texas, and another emergency rooms in Los Angeles County.

We have no systematic surveillance in Los Angeles County for MRSA except for the Jail. The number of cases in the Jail has continued to increase since 2002 when MRSA was first reported from the Jail. However, in the first 7 months of 2006, the number of cases identified at the Jail (~2100) is about the same as identified in the first 7 months of 2005 (~2000). The percentage of cases identified during the first 5 days of incarceration, and this arrived to be community acquired has increased to 38% from 32% in that time period but the percentage identified >15 days, and presumed to be Jail acquired, has remained stable at 42%.

Risk Factors for Community Associated MRSA

Risk factors for CAMRSA include compromised skin integrity, close crowded living conditions, sub-optimal cleanliness, frequent skin to skin contact, contaminated surfaces and shared items. Outbreaks have been reported in athletes, the military, correctional facilities, and schools where conditions for the spread of CAMRSA are enhanced. Risk factors in outbreaks include sharing personal items (towels, razors, soap) and equipment, and close contact with others who have skin infections. CAMRSA has also been found at a higher rate in drug users, the homeless, and the urban poor. However, CAMRSA has also been reported in people with no known risk factors.

CAMRSA is easily spread person to person. Prevention consists of maintaining good hygiene (including access to soap, clean laundry, and bathing facilities), limiting sharing of personal items, environmental cleaning, and early treatment of infections. Even under ideal conditions, outbreaks can occur quickly and require significant resources to control. The conditions inherent in some settings, such as correctional facilities or the homeless, including crowding, sub-optimal hygiene, and limited medical resources, make it difficult if not impossible to control the spread of CAMRSA. Until the underlying conditions are addressed, CAMRSA will remain in these and other communities.

MRSA Control Efforts

The Department of Public Health has taken a variety of steps to assist in the control of CAMRSA. Efforts to educate health care providers include:

- Developing educational material for physicians on CAMRSA
- Developing educational materials for community members on CAMRSA
- Developing guidelines on the reducing the transmission of Staph in non-healthcare settings http://lapublichealth.org/acd/docs/MRSA/MRSA_Guideline_12_20_04.pdf

We continue to update our dedicated CAMRSA website with new articles and information for consumers and healthcare professionals (http://lapublichealth.org/acd/MRSA.htm) and it is one of our most visited sites.

Since 2002, the reports of outbreaks of CAMRSA in the general population have involved fewer cases per outbreak, perhaps reflecting better awareness and quicker reporting by physicians. In the past year, outbreaks have been reported in a football team, a restaurant, firefighters, newborn children, and a commercial gym. All reports are treated seriously but upon further investigation, many of these reported outbreaks have not been able to be confirmed, due to lack of laboratory confirmation or epidemiological linkage, or they have been self-limited. The Department of Public Health (DPH) has consulted with the County of Los Angeles, City of Los Angeles, and City of Burbank EMS systems to address worker protection and work restrictions regarding MRSA. The Division of Environmental Health has made several investigations of gym and other public facilities where individuals have reported contracting MRSA. Most of the facilities have been found in compliance with existing regulations however, efforts are taken to educate the facilities on additional steps to reduce the potential spread of MRSA.

We have made special outreaches to several community stakeholders including schools and gyms. We have also been working closely with the Sheriff's Department since 2002 on the control of MRSA in the Jail.

Prevention and Control in the County Jail

Since our last update in November, 2005, the number of people diagnosed with MRSA at the Jail has stabilized. A total of 3201 cases were identified in 2005, including 2037 from January-August in contrast to 2132 in 2006. A usual summer peak was also noted in 2006 with a high of 304 cases identified in June. In 2005, 36% of the cases were identified $\leq$ 5 days after admission to the Jail versus 38% in 2006. Alternatively, in 2005, 41% of the cases were identified >15 days

after admission to the Jail versus 42% thus far in 2006. Unlike previous years, the acquisition of MRSA from the community in males and females was roughly equal at 38% and 39% respectively. In past years, females have had a higher percent of cases identified in the first 5 days (in 2005, males=33% and females=49%). Males and females were equally likely to have MRSA diagnosed >15 days after admission at 42 and 41% respectively. .

Control of MRSA at the Jail has been complicated by the turnover of inmates and the continued introduction of MRSA into the Jail from the outside. Notable accomplishments include the standardization of treatment for MRSA, the development of tailored health education, and increased access to soap, showers, and clean laundry for all inmates.

The joint DPH-Sheriff Department MRSA Task Force continues to meet bi-monthly. Strides have been made in the distribution of laundry to exceed the Title 15 requirements and meet the MRSA recommendations. New MRSA health education has been developed to overcome "information fatigue" and healthcare personnel are being trained on the proper usage of incision and drainage as first-line treatment for uncomplicated MRSA skin infections.

Prevention and Control Activities in the Skid Row Area

Recently the Skid Row area has received attention regarding MRSA. Education about MRSA is an essential strategy aimed at improved hygiene to reduce exposure and early recognition to facilitate treatment of infections. Because MRSA can colonize numerous areas of the body ensuring good hygiene, such as washing hands, taking showers, using soap, proper laundering procedures or living in a clean environment are essential to minimize its transmission. However, incorporating most of these practices is extremely difficult for a homeless population living on the streets or in crowded shelters.

Further complicating health promotion and prevention are the profiles of the homeless on Skid Row - 35% use drugs, 40% consume excessive alcohol (25% use both), 34% have chronic mental illness, 16% have a dual diagnoses, 35% are physically disabled and 24% have suffered some form of domestic violence. These conditions and behaviors complicate the ability to provide adequate health care for clients, many of whom live with chronic conditions. Some clients tend to "shop" between clinics, making continuity of care difficult, and others do not seek medical attention because they do not trust staff in health care settings. Consequently services have moved outside of clinic walls through street outreach teams. This is often where the first exposure to the impacted/infected individuals takes place, where initial treatment can be provided, and where a trusting relationship may be initiated to encourage clients to seek out expanded services within the clinics.

Public Health has provided several trainings to social service and medical providers in Skid Row to facilitate education, prevention, recognition and treatment of CAMRSA. These include:

- MRSA Training in Skid Row: Our efforts to inform and educate service providers in Skid Row date back to January 2005.
  - In January, 2005, Public Health sent to shelter administrators , a letter and a 4 page guideline on how to reduce the spread of staph in non-healthcare facilities.

- Homeless Healthcare notified their homeless providers contact lists about MRSA. In January 2005 a letter and fact sheet was sent to homeless shelters.
- Los Angeles Homeless Services Authority (LAHSA) broadcasted a notification to all their community contacts via email and fax. Their list of contacts including many shelter (including winter shelters) and services providers, government agencies, and concerned citizens that have elected to receive any information mass distributed by LAHSA.
- Homeless Healthcare reached out to the Skid Row Consortium with providing them with MRSA information supplied by Public Health (January 2005).
- Emergency Network Los Angeles (ENLA) broadcasted to their membership list of non-profits agencies Public Health MRSA information (January 2005).
- Dr. Elizabeth Bancroft (Acute Communicable Disease Control) presented to ENLA members on MRSA (January 5, 2005).
- Public Health presented on MRSA to Homeless Health Care members meeting on (January 27, 2005).
- Dr. Bancroft wrote an article for the ENLA Newsletter about CAMRSA (March 2005).
- Public Health presented on MRSA to the Hepatitis C Task Force (March 16, 2005).
- In August, 2005, an article about the importance of CAMRSA in *The Public's Health* was sent to all physicians in Los Angeles County
- In September 2005, the SPA 4 Area Health Office Medical Director began working with the Executive Director of the Central City East Association and others to address some of the public health issues in the Skid Row area for the residents and first responders. In a series of collaborative efforts with our Acute Communicable Disease Control Program, outreach by the Public Health Community Liaisons and District Public Health Nurses, health education presentations were provided specifically on MRSA. These activities included:
    - In-service on September 19, 2005 to the Volunteers of America including images of MRSA to facilitate recognition and instructions on good hand washing techniques.
    - Public Health Nurses conducted a 30-minute presentation and a 1-hour Q & A session on MRSA to healthcare providers at the Homeless Health Care Los Angeles, Hepatitis C Taskforce in autumn, 2005.
    - Information was disseminated to the entire collaborative of Volunteers of America and to all Skid Row Initiative contacts of the Community Clinics Association of Los Angeles County.
- In February, 2006, Dr. Bancroft gave a presentation to the clinical coordinators of the Community Clinic Association of Los Angeles County (the medical directors of the skid row clinics) about MRSA diagnosis, treatment, and control
- In May, 2006, Dr. Bancroft gave a presentation to the DPSS/Skid Row Family Outreach Team managers meeting about the identification and prevention of MRSA
- On September 28, 2006, MRSA information was dispensed at the Skid Row Initiative general meeting. All the Skid Row missions and health sites were give information to post in their agencies.

- Routine Public Health Nursing Activities: Public Health Nurses also provide services to the homeless population in the Skid Row area thereby facilitating opportunities for education, identification and referral for treatment of skin infections. Examples include:

- Ask A Nurse - Question and Answer Forum held monthly with homeless population in San Julian Park and Gladys Park.
- Public Health Nurses provide educational outreach to the following agencies: San Pedro Elementary School, PACE, Mariposa Head Start, Golden West SRO Hotel (targeting the mentally disabled), Volunteers of America, Para Los Niños, Weingart Housing, URM, LAMP, and Eisner Pediatric Daycare. Public Health Nurses also act as consultants on communicable diseases for these agencies.
- The Community Liaising Program provides up to date public health education information to the area health care providers. This includes CDC alerts on communicable disease topics including pandemic flu and MRSA, as well as emergency preparedness. DPH has been a partner with JWCH and the other agencies through its Coordinated Prevention Network (now the Service Provider Network), and works together on a joint project utilizing an information/referral kiosk in the Central Health Center. Here, clients access a hands-on computer program for health care education and referrals to needed services.
- In August 2006, DPH placed a public health nurse on the Skid Row Assessment Team which consists of representatives from Department of Children and Family Services, a bi-lingual Homeless Case Manager from the Department of Social Services and a representative from Department of Mental Health. The primary objective of this team is to ensure comprehensive assessments of the strengths and needs of families on Skid Row. A comprehensive plan is developed to mitigate any factors that pose a significant risk to the health of any child's health and well being.

In addition to the prevention and control activities described above, Public Health works with Department of Health Services (DHS). DHS is involved in the Skid Row Homeless Healthcare Initiative and provides funding for the JWCH Institute for primary health care in that area. DHS also implements a number of projects that connect the LAC+USC Medical Center to the Skid Row Healthcare Providers including a Specialty Care Project, which gets homeless Skid Row residents into specialty care appointments in an expedited manner and a medical management project, in which a physician and nurse work out of LAC+USC to provide continuity of care between the emergency room and inpatient unit and the Skid Row healthcare providers. JWCH and Pediatric Eisner clinic for families are DHS PPP providers. In addition to their clinics on Skid Row, these primary healthcare providers also conduct street outreach to people living on the streets in the Skid Row area.